

# VALLEY WEATHER WIND



**Fall 2010**

**National Weather Service  
Omaha/Valley, Nebraska**

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**A Newsletter for Emergency  
Managers, Core Storm Spotters,  
Media, and Public Officials in  
Eastern Nebraska and  
Southwest Iowa**

Comments and suggestions  
are always welcome.  
Your feedback is  
very important to us!

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## Summer 2010 Flooding

*by Rebecca Kern, Meteorologist*

Repeated heavy rainfall in June and July caused numerous rivers and streams to rise above flood stage. Most of the area received at least 100-300% of normal precipitation for June, with the exception of southeast Nebraska where not as much rain fell. At some point in the summer, just about every point in the entire area was under some type of flood watch, warning, or advisory. Three rivers reached record flooding in June: the Missouri River at Rulo, the Elkhorn River at both Neligh and Norfolk, and Weeping Water Creek at Union.

Other hard hit areas included Pierce on the North Fork of the Elkhorn River and the King Lake area near Waterloo along the Elkhorn River. Several properties were inundated with flood waters at King Lake as Rawhide Creek and the Elkhorn River backed up.

Many roads and bridges were closed due to the flood waters. Some of the major roads and highways include: Highway 92 near Nickerson, Highway 77 by Hooper, Highway 275 north of Scribner, Highway 30 near Arlington, Highway 81 south of Norfolk, and Highway 36 north of Waterloo, among many others. A railroad bridge southwest of Norfolk collapsed, sending two Nebraska Central Railroad employees into the swollen Elkhorn River. One of the workers was rescued from the water, while another perished at the site.

The crests of many sites around the area are in the table that follows.

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Flooding near Neligh, NE, in June 2010. Photo courtesy of the Nebraska Emergency Management Agency.

## Summer 2010 Flooding, cont'd

Flood crests from around the area:

Site	Flood Stage (feet)	Crest (feet)	Crest Date	Record Crest (before 2010)	Record Year
<b>Missouri River</b>					
Rulo	17.0	26.63*	6/23/2010	25.60	1952
Nebraska City	18.0	25.21	6/23/2010	27.66	1952
Brownville	32.0	42.89	6/23/2010	44.30	1993
<b>Elkhorn River</b>					
Neligh	10.0	15.54*	6/15/2010	13.37	1995
Norfolk	12.0	16.85*	6/12/2010	15.63	1949
Pilger	12.0	15.21	6/16/2010	19.85	2002
West Point	12.0	15.36	6/17/2010	18.60	1993
Waterloo	17.0	18.72	6/15/2010	19.12	1962
<b>North Fork Elkhorn River</b>					
Pierce 2SE	12.0	14.21	6/13/2010	15.10	1971
<b>Platte River</b>					
Louisville	9.0	10.31	6/14/2010	12.45	1960
<b>Weeping Water Creek</b>					
Union	25.0	32.62*	6/21/2010	30.97	1993
<b>Pebble Creek</b>					
Scribner No.2	18.0	23.08	6/10/2010	24.48	1996
<b>East Nishnabotna River</b>					
Red Oak	18.0	21.85	6/12/2010	29.39	1998
<b>Nishnabotna River</b>					
Hamburg	23.0	26.98	6/15/2010	33.18	1998

\* Record Crest

## NWS Employees Assist at Nebraska Emergency Management Agency

*by Rebecca Kern, Meteorologist*

Forecasters from the National Weather Service (NWS) office in Valley and Hastings, NE were among those who volunteered to staff the Nebraska Emergency Operations Center and the Joint Information Center in Lincoln, NE, during the record flooding of June 2010. Forecasters relayed vital up-to-date flooding and weather forecast information to various agencies and officials, including the U.S. Army Corp of Engineers, the Department of Natural Resources, Nebraska State Patrol, State Fire Marshal, and the Nebraska governor's office. Working closely with the other officials and agencies allowed for seamless communication among all who were working to protect the citizens of Nebraska.

## Flood Photo Collection

Below are a few of the many pictures of flooding from around the area this summer.

Flooding near Neligh, NE, in June 2010. Photo courtesy of the Nebraska Emergency Management Agency.



Flooding near King Lake, NE, in June 2010. Photo courtesy of the Douglas County Emergency Manager.



Flooding near Norfolk, NE, in June 2010. Photo courtesy of the Nebraska Emergency Management Agency.



Flooding near Rulo, NE, in June 2010. Photo courtesy of the Nebraska Emergency Management Agency.



## Dam Failures in Nebraska

*by Rebecca Kern, Meteorologist*

Although no dams were breached or overtopped across the NWS Omaha/Valley, NE, county warning area, heavy rain caused several dams across parts of western and central Nebraska to fail. The flooding caused the failure of six dams : Bredthauer Dam in Valley County, Ericson Dam in Wheeler County, Gracie Creek Road Dam in Loup County, Morgan Dam in Loup County, Ord-North Loup Diversion Dam in Valley County, and Taylor-Ord Diversion Dam in Loup County. Six other dams across the state were overtopped by floodwaters but did not fail. Some of these failures caused rises in rivers that run through the Omaha/Valley, NE county warning area. The dam failures did not cause any significant property damage; however, a few flash flood warnings were issued directly downstream of the dam failures. Fortunately, no loss of life occurred because of the dam failures. Source: Nebraska Department of Natural Resources

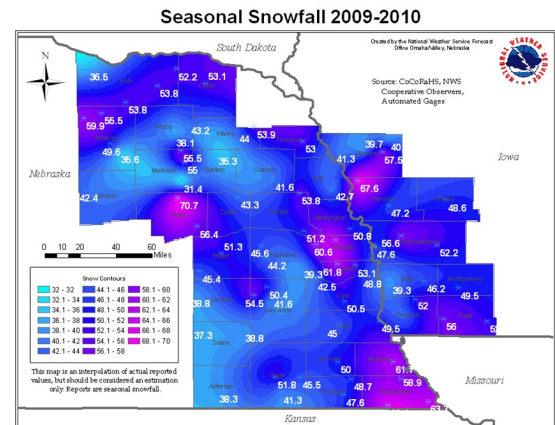


## After a Snowy Winter, How Wet Was the Summer?

by Cathy Zapotocny, Meteorologist

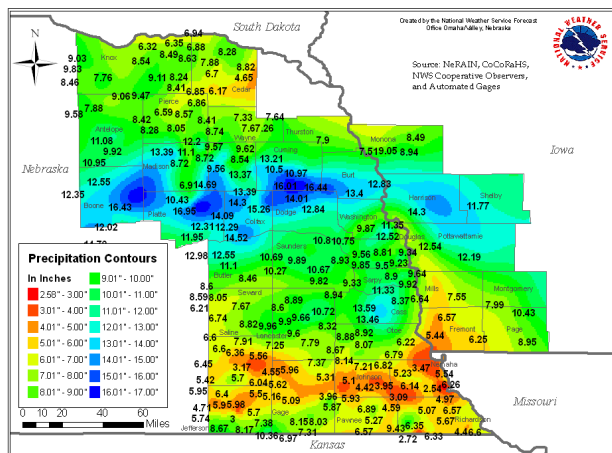
Weather affects us in all aspects of our daily lives, whether it be personal, professional, or recreational. Although people in the Midwest are used to these extremes in weather, it's nice to put each season in perspective and compare it to years past.

The Spring 2010 newsletter detailed the snowfall records from last season. Most notable was the fact that Omaha set a record with 88 days of 1 inch or more of snow on the ground, and Lincoln came in with a rank of 2<sup>nd</sup> for their duration of 1 inch or more of snow on the ground with 85 days. In addition, it was the snowiest December on record for Omaha, Lincoln, and Norfolk. The seasonal normal snowfall based on the 1971-2000 normals for Omaha, Lincoln, and Norfolk are 27.1, 28.8, and 32.1 inches respectively. Many locations reported 150% to 200% of their normal seasonal snowfall, with 47.6 inches at Omaha, 41.6 inches at Lincoln, and 55 inches at Norfolk.

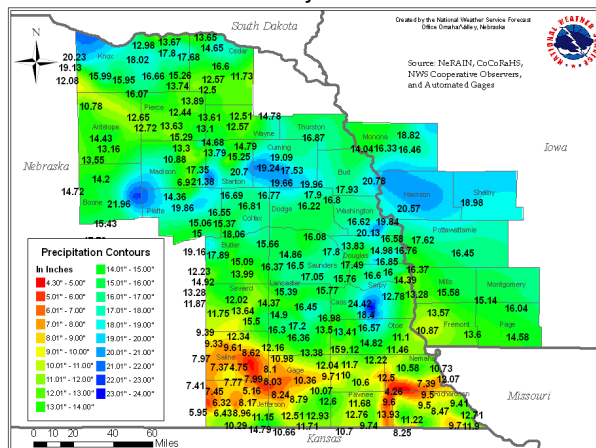


## After a Snowy Winter, How Wet Was the Summer?, cont'd

June Rainfall 2010

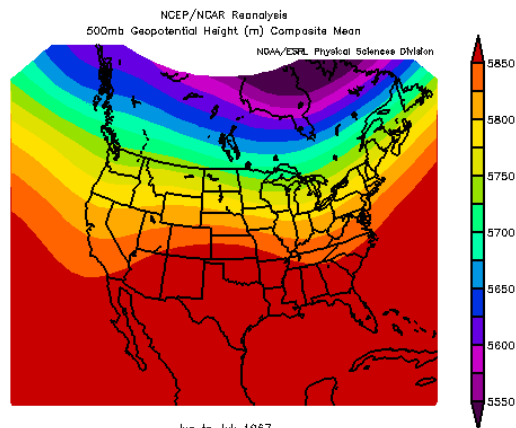
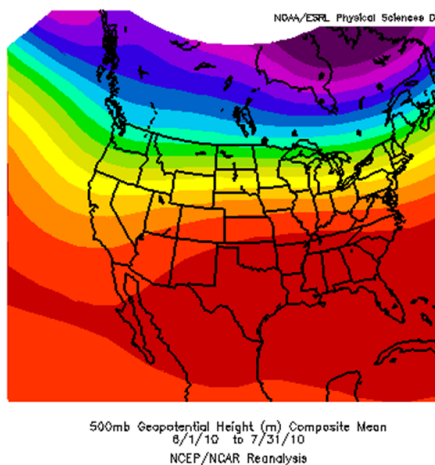


June and July Rainfall 2010



The abundant rainfall was caused in part by a favorable upper-level pattern. In June and July, the average pattern had a trough in the west, a flat ridge across the central U.S., and a trough over eastern Canada (see the images below). The pattern allowed for abundant moisture to be drawn northward, with frequent frontal boundary passages aiding thunderstorm development. The pattern was similar to the upper-level pattern in 1967, when a number of rainfall records were also set.

In addition, the winds at lower levels were unusually strong from the Gulf of Mexico into the central U.S. in June through July 2010, with unusually high moisture on average through the atmosphere as it was carried from the Gulf into the central U.S. The moisture profile through the atmosphere at NWS



Omaha, measured as "precipitable water" by the 7:00 PM weather balloon, set a record on July 4 and then tied it again on July 14 with 2.37 inches of precipitable water through the atmosphere over Omaha.

## Winter Weather Awareness

by Brian Smith, Warning Coordination Meteorologist

Nebraska Winter Weather Awareness Day is Thursday, November 4th. Public Information Statements will be issued throughout the day. A Governor's Proclamation on Wednesday, October 6th. The Nebraska Winter Weather Awareness Committee will have a online newsletter available the first week of November.

Iowa Winter Weather Day is Tuesday, November 9th. Public Information Messages will be issued during the day. A podcast answering winter weather questions will be posted on the NWS Des Moines web page and the Iowa Homeland Security and Emergency Management web site in early October.

## Winter Outlook

by Barbara Mayes, Meteorologist

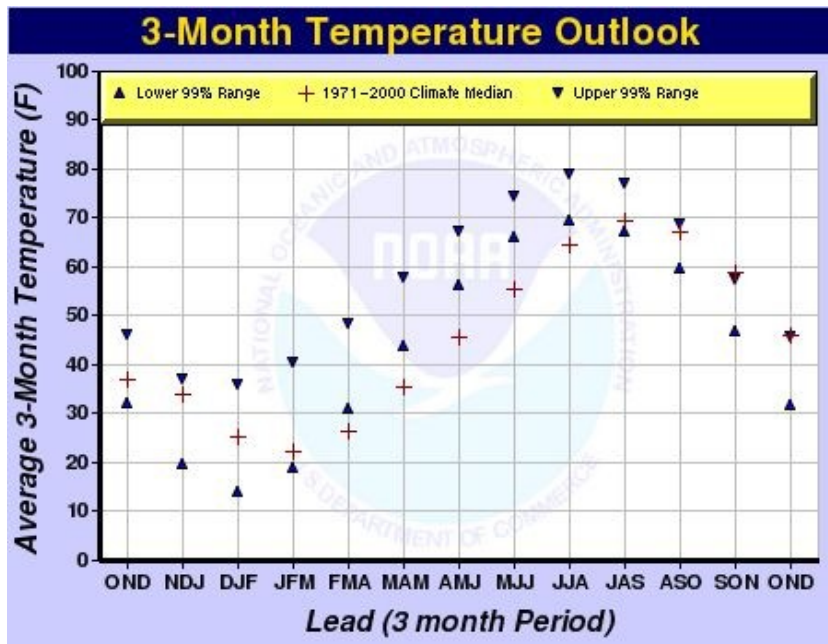
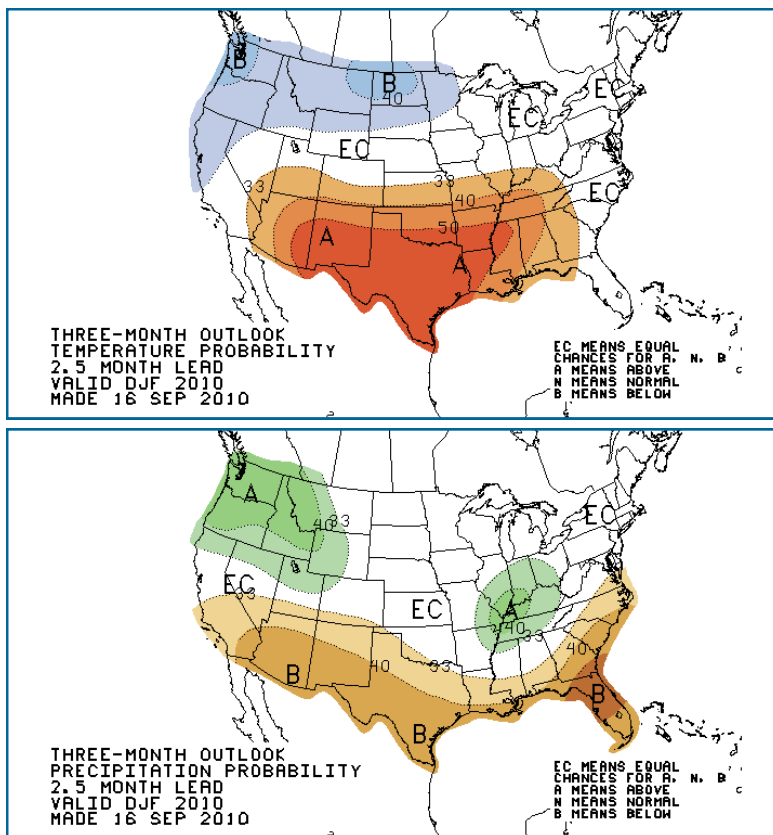
For the winter months (November through January), the National Weather Service's Climate Prediction Center is equal chances of above, near, and below normal temperatures and precipitation (images right). Nebraska and Iowa are between areas that typically see a strong temperature signal in La Niña winters, and thus the forecast in between those areas is not confident.

The "temperatures" that are forecast are an average of the daily highs and lows, which are then averaged over the entire 3-month period. The precipitation forecast accounts for all precipitation (rain and other liquid equivalent) for the entire 3-month period.

NWS Climate Prediction Center forecasts are available at:  
<http://www.cpc.ncep.noaa.gov/>

The National Weather Service also produces seasonal temperature forecasts for 10 points within eastern Nebraska and western Iowa. The forecast at one point, Omaha, is included for demonstration (image below). Like the forecast across the region, the Omaha outlook indicates a tilting of the odds toward a below normal summer. These forecasts are available at:

[http://www.weather.gov/climate/calendar\\_outlook.php?wfo=oax](http://www.weather.gov/climate/calendar_outlook.php?wfo=oax)



The ocean temperatures in the Pacific Ocean near the equator are currently in a La Niña state, with ocean temperatures more than 0.5 °C below normal. La Niña winters do not provide as strong of a temperature or precipitation forecast for the area, with strong signal for the potential for above normal temperatures to the south and below normal temperatures to the north, but with the Nebraska and Iowa areas stuck in between. However, during the spring that follows a La Niña winter, the area does see a higher-than-usual chance for above normal tornado activity.



## Long-Time Omaha Administrative Assistant Betty Jo Addison Retires

Betty Jo (B.J.) Addison, the Administrative Assistant (ASA) at National Weather Service (NWS) Omaha, retired on July 3rd after 39 years of service. Family and friends had a wonderful retirement party with BJ on July 24 at Izaak Walton Park in Fremont, Nebraska. After a nice meal, BJ was given a "friendly" roast with many of her friends and coworkers sharing some of the more entertaining experiences of her career.



During B.J.'s NWS career, she had worked with six Meteorologists in Charge and had been directly involved in the moving/building of a new office twice. She was a part of the National Weather Service as it evolved from teletypes, manual typewriters, and tube-type radars to today's Doppler radar, AWIPS work stations, e-mail, and cell phones. B.J. had numerous opportunities to be involved in various facets of the NWS, including the first NWS Women's Conference held in 1993 in Silver Spring, MD.

B.J. looked back at her career with the thought that it had been both a privilege and pleasure to have worked for the National Weather Service. B.J. said her memorable experiences will be her many associations with the unique, dedicated and talented family of NWS employees. B.J. went on to say she had enjoyed the camaraderie that came from sharing the work, accomplishments and laughter.

Upon retirement, B.J. is enjoying working with her certified pet therapy dog, Coco, visiting care centers, libraries, and schools. B.J. and her husband, Jim, plan to spend more time with their families, golf, and pursue new interests and activities.

The NWS Omaha staff wishing B.J. nothing but the very best in her happy retirement years.

## Welcome to New Administrative Assistant Brandon Goble

After 39 years with one constant Administrative Assistant (ASA) at National Weather Service (NWS) Omaha/Valley, we have a brand new one! We are very lucky to have Brandon Goble as new ASA. What else would one expect but to welcome Brandon to the NWS with some powerful thunderstorms and severe weather.

Brandon was born and raised in rural Nebraska, attended college at the University of Nebraska at Kearney, and began his career with the Federal Government in 2008 when he accepted a secretary position with the Bureau of Reclamation's Civil Rights Office/Equal Employment Opportunity Headquarters in Denver, Colorado. During his year with Reclamation's Civil Rights Office, he was also elected chair of the Denver Administrative Support Council and appointed chair of the Employee Appreciation Day Committee. He then transferred to the National Park Service Midwest Regional Office in Omaha, Nebraska, and began working in the Park Operations and Education/Law Enforcement Division. In addition to serving as division secretary and the personal assistant to the Regional Chief Law Enforcement Ranger, Brandon also oversaw a \$10.5 million budget as a portion of the Environmental Protection Agency \$270 million Great Lakes Restoration Initiative, and he was responsible for all aspects of budget formulation, planning, and reconciliation. Prior to working on the civilian side of the federal government, Brandon enlisted in the active duty U.S. Army from 2004-2007, where he served as an Arabic linguist for the 229th Military Intelligence Battalion in Monterey, California. Brandon said he is very happy to be with the National Weather Service and is looking forward to making a meaningful contribution to the agency's daily operations.



Welcome Brandon, and we are thrilled to have you as the newest member of our NWS family at WFO Omaha.

## Climatological and Astronomical Data

Compiled by Steve Klemm, Hydro-Meteorological Technician

### Climatological Data for May through August 2010

Location	Month	Average	Departure	Rain / Snow	Departure	Highest	Lowest
Omaha	May	61.9°	-0.3°	2.54" / 0"	-1.90"	91° (24th)	37° (8th)
	Jun	74.3°	+2.1°	9.25" / 0"	+5.30"	94° (17th, 26th)	53° (3rd)
	Jul	78.2°	+1.5°	6.32" / 0"	+2.46"	96° (14th)	64° (9th, 25th)
	Aug	79.0°	+4.5°	4.83" / 0"	+1.62"	99° (11th)	58° (25th)
Lincoln	May	60.5°	-1.5°	3.70" / 0"	-0.53"	89° (23rd)	35° (14th)
	Jun	74.2°	+1.5°	9.90" / 0"	+6.39"	96° (17th)	53° (3rd)
	Jul	77.8°	0.0°	5.83" / 0"	+2.29"	96° (14th)	59° (9th)
	Aug	78.1°	+2.7°	2.81" / 0"	-0.54"	100° (12th)	52° (25th)
Norfolk	May	58.7°	-1.6°	2.12" / 0"	-1.80"	89° (23rd, 29th)	34° (8th)
	Jun	71.1°	+1.0°	10.71" / 0"	+6.46"	94° (26th)	47° (3rd)
	Jul	75.4°	+0.6°	3.42" / 0"	-0.32"	93° (27th)	57° (9th)
	Aug	75.4°	+2.7°	4.48" / 0"	+1.68"	96° (11th, 12th)	57° (25th)

### Normal High/Low Temperatures

### Outlook for November, December, and January

Location	Oct 1	Nov 1	Dec 1	Jan 1
Omaha	72/47	56/34	40/22	32/12
Lincoln	74/47	57/33	41/21	33/12
Norfolk	71/44	54/31	88/18	31/10

The outlook for November, December, and January calls for equal chances for above, near, and below normal temperatures and precipitation. For additional details and other outlook information, please visit the Climate Prediction Center website at <http://www.cpc.ncep.noaa.gov/>

### Sunrise/Sunset ([http://aa.usno.navy.mil/data/docs/RS\\_OneYear.html](http://aa.usno.navy.mil/data/docs/RS_OneYear.html))

Date	Omaha		Lincoln		Norfolk		Times are given in CDT (Central Daylight Time) and CST (Central Standard Time)
	Sunrise	Sunset	Sunrise	Sunset	Sunrise	Sunset	
Oct 1	7:20 am CDT	7:06 pm CDT	7:23 am CDT	7:09 pm CDT	7:26 am CDT	7:12 pm CDT	
Nov 1	7:55 am CDT	6:19 pm CDT	7:57 am CDT	6:23 pm CDT	8:02 am CDT	6:24 pm CDT	
Dec 1	7:30 am CST	4:55 pm CST	7:31 am CST	5:00 pm CST	7:38 am CST	4:59 pm CST	
Jan 1	7:50 am CST	5:05 pm CST	7:51 am CST	5:10 pm CST	7:58 am CST	5:09 pm CST	

### Moon Phases

New Moon	First Quarter	Full Moon	Last Quarter
Oct 7	Oct 14	Oct 22	Oct 30
Nov 5	Nov 13	Nov 21	Nov 28
Dec 5	Dec 13	Dec 21	Dec 27
Jan 4	Jan 12	Jan 19	Jan 26



**Central Standard Time begins** at 2 am on November 7th, 2010.

**Winter Solstice** (Start of Astronomical Winter): Tuesday, December 21st, 2010, at 5:39 pm CST